



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,320	07/25/2003	Martin Theriault	Series 5352	2281

7590 10/05/2004

Linda K. Russell
Intellectual Property Department
Air Liquide
2700 Post Oak Boulevard, Suite 1800
Houston, TX 77056

EXAMINER

RAGONESE, ANDREA M

ART UNIT	PAPER NUMBER
----------	--------------

3743

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/627,320
10/627,930

Applicant(s)
MANDALL, MICHAEL C.

Examiner
Andrea M. Ragonese

Art Unit
3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed on July 9, 2004 has been entered. Examiner acknowledges that **claim 10** has been amended and **claim 17** has been canceled.
2. Upon further analysis of the prior art disclosure as a whole and in light of this, further consideration of the claimed invention, the allowable subject matter indicated in the previous Office action has been withdrawn. The analysis indicates that the claimed drying criteria—specifically “removing about 0.1% or more of the weight...”—would inherently be met by the prior art of record. Subsequently, this non-final Office action has set forth new grounds of rejections for the pending claims.

Claim Rejections - 35 USC § 102 and 35 USC § 103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3743

5. **Claims 10 and 13-16** are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Robertson et al. (US 4,838,911).

6. Regarding **claim 10**, Robertson et al. discloses a method for eliminating moisture from electronic components inherent in the use and operation of a storage cabinet, as shown in Figures 1-3, comprising the steps of:

- storing electronic components in a storage area **10**;
- maintaining a warm and dry atmosphere in the storage area **10** by enclosing the storage area **10** and injecting a warm and dry gas into the storage area **10** at a flow rate and temperature which are controlled to eliminate moisture from the components in the storage area **10** (column 3, lines 3-19); and
- removing about 0.1% or more of the weight of the components by elimination of moisture while the components are stored in a storage area **10** (column 1, lines 61-68 and column 2, lines 1-7).

7. Regarding the step of "removing about 0.1% or more of the weight...", storage of electronic components, even when the atmosphere inside a storage area is being maintained and controlled, would inherently have at least a 0.1% loss (or even a potentially higher amount) of moisture, which would account for removing 0.1% or more of the weight of the components. This is because there is no absolute method for maintaining the atmosphere inside a storage area without experiencing some losses, such as pressure, temperature, etc. Therefore, at some point during the storage of these components, there would be a fluctuation in the amount of moisture, and thus in

Art Unit: 3743

the weight, of the components. Inherently, the storage cabinet **12** of Robertson et al. would inherently be capable of removing about 0.1% or more of the weight of the components by elimination of moisture while the components are stored in a storage area **10**.

8. Regarding **claim 13**, the component storage area **10** is a storage cabinet **12** having a base portion **14**, a body portion **16** and a top surface **18**, for storing the components, as shown in Figure 1 (column 2, lines 24-33).

9. Regarding **claim 14**, a temperature control system **68, 66** is used for controlling a temperature of the dry gas to about 10°C to about 60°C, wherein the ideal component temperature is between about 65°F (18°C) to about 75°F (21°C) in order to prevent permanent damage to the components (column 1, lines 35-38).

10. Regarding **claim 15**, the temperature control system **68, 66** controls the temperature of the dry gas to about 20°C to about 50°C, wherein the ideal component temperature of about 65°F (18°C) to about 75°F (21°C) still falls within this range $\pm 2^\circ\text{C}$.

11. Regarding **claim 16**, the flow rate of the dry gas delivered to the storage area **10** is controlled by a control system including a humidity sensor within the component storage area **10**, as shown in Figure 2B (column 3, lines 52-57).

Claim Rejections - 35 USC § 103

12. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson et al. (US 4,838,911), as applied to **claims 10** and **13-16** above, in view of Takano (US 5,749,234). Robertson et al. teaches a method comprising all limitations recited in **claim 11**, with the exception of a component storage area that is a feeder cart

Art Unit: 3743

for storing the components. Takano teaches the use of casters on a storage cabinet to make it transportable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add casters to the component storage apparatus of Robertson et al. to turn the apparatus into a feeder cart because, as taught by Takano, it is well-known in the art to attach casters—small wheels on a swivel—under pieces of furniture, such as storage cabinets, in order to make it easier to move.

13. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson et al. (US 4,838,911), as applied to **claims 10** and **13-16** above, in view of Rieger (EP 0 959 653 A2). Robertson et al. teaches an apparatus comprising all limitations recited in **claim 12**, with the exception of a component storage area that is a cabinet receiving at least one feeder cart for storing the components. Rieger teaches the use of a storage cabinet with a gas-tight housing for receiving at least one feeder cart for long-term storage of electronic components. It would have been obvious to one having ordinary skill in the art at the time the invention was made to turn the component storage area of Robertson et al. into a cabinet for receiving at least one feeder cart for storing the components because, as taught by Rieger, it is well-known in the art to store electronic components in a gas-tight house with a defined gaseous atmosphere obtained via a dehumidifier in order to prevent damage to stored components resulting from air humidity.

Art Unit: 3743

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Andrea M. Ragonese** whose telephone number is **703-306-4055**. The examiner can normally be reached on Monday through Friday from 8 am until 4:30 pm.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry A. Bennett can be reached on 703-308-0101. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AMR



Henry A. Bennett
Supervisory Patent Examiner
703-308-0101